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Model for Test Method Executive Control Committee (TMECC) Organization and Procedures Part of United States Geological Survey Recognition of Spatial Data Transfer Standard (SDTS) Topological Vector Profile (TVP) Certification System

Prepared by:
William H. Dashiell
L. Arnold Johnson
Lynne S. Rosenthal

Prepared for:
United States Geological Survey
560 National Center
Reston, Virginia 22092

U.S. DEPARTMENT OF COMMERCE
Technology Administration
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U.S. DEPARTMENT OF COMMERCE
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for Technology

NATIONAL INSTITUTE OF STANDARDS
AND TECHNOLOGY
Raymond G. Kammer, Director

United States Geological Survey Certification System Documents

The Model for United States Geological Survey Recognition of Spatial Data Transfer Standard (SDTS) Topological Vector Profile (TVP) Certification System includes a total of five (5) documents which are enumerated below:

1. Overview of Model for United states Geological Survey Recognition of Spatial Data Transfer Standard (SDTS) Topological Vector Profile (TVP) Certification System.
2. Model for Test Method Executive Control Committee (TMECC) Organization and Procedures Part of United States Geological Survey Recognition of Spatial Data Transfer Standard (SDTS) Topological Vector Profile (TVP) Certification System.
3. Criteria for United States Geological Survey (USGS) Recognizing Certificate Issuing Organizations Activities and Requirements Part of United States Geological Survey Recognition of Spatial Data Transfer Standard (SDTS) Topological Vector Profile (TVP) Certification System.
4. Criteria for United States Geological Survey (USGS) Recognizing Testing Laboratory/ies Activities and Requirements Part of United States Geological Survey Recognition of Spatial Data Transfer Standard (SDTS) Topological Vector Profile (TVP) Certification System.
5. Spatial Data Transfer Standard (SDTS) Topological Vector Profile (TVP) Validation Procedures Part of United States Geological Survey Recognition of Spatial Data Transfer Standard (SDTS) Topological Vector Profile (TVP) Certification System

Definition of Terms: See Model for United States Geological Survey Recognition of Spatial Data Transfer Standard (SDTS) Topological Vector Profile (TVP) Certification System for definition of terms.

1. BACKGROUND

This document describes a model for the organization and procedures of a Test Method Executive Control Committee. The Sponsoring Organization Model (SOM) for Recognition of Information Technology Certification System upon which this document is built provides a practical approach to conformance assessment where:

(1) minimal resources or expertise are available from the Sponsoring Organization for supporting such activities,
(2) the software community needs such a validation program, and/or
(3) the software community resources (costs, time, effort) are insufficient to seek accreditation from a formal accreditation organization.

Certification System consists of the USGS, the TMECC, the USGS recognized CIO(s), and the CIO recognized Testing Laboratory/ies. Note that the Testing Laboratory/ies are to be initially recognized by the USGS. Subsequent recognition is to be by the USGS recognized CIO(s).

The Test Method Executive Control Committee (TMECC) performs the functions of administration and technical authority. Examples of TMECC administration are: controlling the Test Suite by requiring the USGS recognized Certificate Issuing Organizations (CIOs) to each make the same changes to the Test Suite; coordinating issues of interpretations of the Standard, controlling the Validation Procedures, etc. Examples of TMECC technical authority are: resolving Validation Issues, adjudicating the appeals process, etc.

2. ORGANIZATION

2.1 Functions

A TMECC is established to implement the Test Method control procedures defined herein. The TMECC is responsible for:

- Resolving Validation Issues.

- Overseeing the maintenance of the Test Suite.
- Recommending changes to and approval of new versions of the Test Suite.
- Resolving issues of interpretations of the Standard.
- Reviewing and advising on the procedures and documentation associated with the Test Suite.
- Advising CIO(s), Testing Laboratories, Validation Customers, and others about validation related issues.
- Controlling changes to the validation process.
- Establishing general oversight for implementation of new test versions, and for the specifications which drive software or test Suite changes.
- Addressing at the initial meeting of the TMECC the following points:
    - acceptance/recognition of the Test Suite;
    - confirmation of roles on the committee (Chairperson, Secretary, etc.);
    - representation on the committee (is it reasonably balanced, is/are CIO(s) represented, etc.);
    - confirmation of the most appropriate interface mechanism(s) to the relevant Standards authorities;
    - method of communications among the members;
    - formulation of policy matters relating to the operation of the TMECC;
    - overview of the implementation of the TMECC policies;
    - overview of the finances of the TMECC;
    - establishment of committees as required to which defined activities are delegated; and
    - provision for the consideration of appeals against the TMECC decisions.

During the initial TMECC meeting, the members shall decide on the minimum number of votes required to decide a Validation Issue; and the TMECC members shall decide the time limit for accepting by default a Validation Issue.

2.2 Membership

It is intended that the following organizations be members of the TMECC:

- The USGS
- CIO(s) and Test Laboratories assessing conformance to the Standard.
- Invited participants, taken from the following:

    i) Standard implementation developers
    ii) implementation users
    iii) representative(s) from the committee formally responsible for controlling the content of the SDTS Standard.
    iv) other interested parties

The TMECC designates a member responsible for establishing and maintaining the membership list. The initial suggested membership is in Appendix A.

If possible, a representative from the USGS SDTS/TVP Standards Committee shall be included to facilitate rapid interpretation of the USGS SDTS/TVP and or to facilitate rapid communication between the TMECC and USGS SDTS/TVP Standards Committee.

Each member organization has one (1) vote.

2.3 Officers of the TMECC

The officers of the TMECC are the Chair and the Secretariat.

TMECC members elect from themselves the Secretariat for the TMECC.

The Chair will initially be provided by the USGS.

Duties of the Chair include:

- Advising the secretariat as to the contents and ordering of the agenda.
- Responsibility for conducting the meetings in accordance with the agenda.
- Reviewing the minutes of the meeting prior to distribution.

Secretariat duties include:

- Keeping and distributing the minutes of meeting of the TMECC.
- Maintaining records for the TMECC.
- Notifying the membership of the time, place and agenda of TMECC meetings.
- Forwarding copies of all minutes, TMECC correspondence, and TMECC findings to the membership.
- Monitoring electronic mail correspondence.
- Providing the Recording Secretary for each TMECC meeting.
- Resolution of Requests for Interpretations (see 3.2).

2.4 TMECC Procedures

All matters to be resolved by the TMECC shall be determined by consensus or as determined by the TMECC policy.

It is expected that some TMECC matters will be resolved by correspondence (e.g. electronic mail) rather than by meetings. During the initial TMECC meeting, the TMECC members shall decide the forum and medium for future meetings. All such correspondence shall be copied to, and recorded by, the Secretariat.

It is expected that the TMECC will attempt to resolve Validation Issues within two weeks.

TMECC oversight duties of the Test Suite include:

- Dissemination of specifications for changes to the Test Suite.
- Archiving and maintaining records of TMECC recommended changes to the Test Suite.
- Coordinating among the CIOs the updating of the Test Suite to provide conformance testing for revision(s) to the Standard.

3. Review Procedures

3.1 Test Suite Maintenance

- The proposed cycle of review and release is illustrated in Appendix B.
- New versions of the Test Suite shall be issued no more frequently than once a year. The TMECC prior to issuance shall approve new versions of the Test Suite.
- New versions of the Test Suite shall be made available for field testing by TMECC designated beta test sites at least three months prior to the effective date.
- A public announcement shall be made when new releases of the Test Suite are available. Ordering information and the effective date of use for official conformance testing shall be included in this announcement. This announcement shall be made at least three months prior to the effective date. A transition period of three months provides for the orderly introduction of a new release of the Test Suite.
- Users of the Test Suite may request changes to any portion of the Test Suite; e.g., testing support tools, associated documentation, Validation Procedure, or other validation related issue.. Requests for change shall be submitted in writing to the Secretariat of the TMECC or a CIO conducting conformance testing. All requests received by a CIO shall be forwarded to the TMECC for consideration.
- The TMECC shall evaluate and resolve all requests for changes to the Test Suite.
- The TMECC shall authorize the withdrawal of any test case, which is found to be incorrect. In each instance, the test case is withdrawn from the current version of the Test Suite used for all testing performed subsequent to the date of withdrawal of the test case. Each CIO will maintain a list of withdrawn test cases. The list of withdrawn test cases shall be included in each test report. Withdrawn test cases do not count towards the results of testing.
- The TMECC shall be responsible for reviewing all interpretations published by the recognized standards body responsible for the development of the Standard to determine any necessary changes to the Test Suite resulting from the interpretations.
- Any necessary changes to the Test Suite resulting from interpretations of the Standard language or the Test Suite shall be processed in accordance with these procedures.
- Each release of the Test Suite shall be accompanied by documentation for implementing and using the Test Suite. This documentation shall include a User's Guide, Operator's Manual, and instructions for the submission of Software Error Reports.
- Changes to these procedures may be recommended and submitted to the TMECC.

3.2 Requests for interpretation will be submitted to the Secretariat for distribution to the TMECC membership for consideration and resolution. Requests for interpretation may be of two types:

- Interpretations of the Standard language
- Interpretations of Validation Issues

Any test cases that may be affected by pending interpretations shall remain in the Test Suite until action is completed on the interpretation. Such test cases shall result in non-conformities being identified in the test report. The test report shall state that an interpretation is pending in these cases. Test cases subject to

interpretation do not count toward the results of testing and are included in the Validation Summary Report for informative purposes.

Where interpretation of the Validation Procedures, documentation, or other validation related validation issues arises, the TMECC ruling or interpretation shall be binding on the Certification System members.

Requests for interpretation of a Standard language will be sent to the recognized standards body responsible for the development of the relevant standard for a recommended interpretation. Further processing of the resulting interpretation will be in accordance with these procedures.

The TMECC shall evaluate and resolve all challenges to the Test Suite. Any changes to the Test Suite resulting from the resolution of these challenges shall be processed in accordance with these procedures.

The TMECC shall provide technical assistance to the CIOs, Testing Laboratory/ies and other users in the implementation and use of the validation issues.

APPENDIX A
TMECC Membership

The proposed initial membership of the TMECC is as follows:

1. Chair:

   USGS

2. Secretariat:

   USGS designated CIO

3. Test Laboratories & Certificate Issuing Organization:

   <none have been identified yet>

4. USGS SDTS/TVP Implementers:

   <none have been identified yet>

5. USGS SDTS/TVP Users (Non-Implementers):

   <none have been identified yet>

6. Others

   <it is expected that others will be co-opted>

APPENDIX B
Test Suite Control

The review and release cycle can be illustrated as follows:

MONTHS
|
|
Y |-1
E |-2
A |-3
R |-4
|-5
O |-6
N |-7 - Test Method Executive Control Committee meeting
E |-8
|-9 - Beta release of revised suite
|-10
|-11 - Close of beta release period
|-12 - Formal release of revised suite
Y |-1
E |-2
A |-3 - Effective date for use of revised suite in validation
R |-4
|-5
T |-6
W |-7 - Review cycle repeats (next committee meeting)
O |-8
|-9